

## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. <b>PCT/KR2004/000692</b>	International filing date (day/month/year) <b>26 MARCH 2004 (26.03.2004)</b>	Priority date (day/month/year) <b>28 MARCH 2003 (28.03.2003)</b>	
International Patent Classification (IPC) or national classification and IPC <b>IPC7 F25D 11/02</b>			
Applicant <b>LG ELECTRONICS INC. et al</b>			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>

Date of submission of the demand <b>15 SEPTEMBER 2004 (15.09.2004)</b>	Date of completion of this report <b>21 JUNE 2005 (21.06.2005)</b>
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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/000692

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 

This report is based on translations from the original language into the following language English which is the language of a translation furnished for the purposes of:
 
  - international search (under Rules 12.3 and 23.1(b))
  - publication of the international application (under Rule 12.4)
  - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):
 

the international application as originally filed/furnished

the description:  
pages \_\_\_\_\_ received by this Authority on \_\_\_\_\_ as originally filed/furnished  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:  
pages \_\_\_\_\_ as originally filed/furnished  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_ as amended (together with any statement) under Article 19  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:  
pages \_\_\_\_\_ as originally filed/furnished  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3.  The amendments have resulted in the cancellation of:
 

the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_  
 the drawings, sheets \_\_\_\_\_  
 the sequence listing (specify) : \_\_\_\_\_  
 any table(s) related to sequence listing (specify) : \_\_\_\_\_
4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 

the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_  
 the drawings, sheets \_\_\_\_\_  
 the sequence listing (specify): \_\_\_\_\_  
 any table(s) related to sequence listing (specify) : \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/000692

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-32	YES
	Claims		NO
Inventive step (IS)	Claims	1-32	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-32	YES
	Claims		NO

**2. Citations and explanations (Rule 70.7)**

Reference is made to the following documents:

D1: JP 11-304331 A (05 November 1999)

D2: US 4543800 A (01 October 1985)

D3: US 5956967 A (28 September 1999)

Claims 1-32 claim a refrigerator comprising a refrigerating chamber formed at a lower portion of the body of said refrigerator; a freezing chamber formed at an upper portion thereof; an ice making chamber provided with an ice maker and an ice storage which are partitioned and separately formed in said refrigerating chamber; heat exchangers provided at said refrigerating chamber and said freezing chamber; a valve for controlling the functions of filtering the water supplied from the outside, storing the water in a water tank and supplying the water to said ice maker; and doors provided at left and right sides of said refrigerating chamber; and a dispenser formed at one side of the door.

D1 discloses a refrigerator comprising: a refrigerating chamber formed at an upper portion of said refrigerator; a freezing chamber formed on a lower portion thereof; and an ice maker and an ice storage formed between said refrigerating chamber and said freezing chamber.

D2 discloses a refrigerator comprising a pair of doors rotated by hinges at upper and lower portions of said refrigerator, an ice maker and an ice storage in order to supply cold water and ice through a dispenser formed at one side of the door.

D3 discloses a dispenser of a refrigerator for supplying cold water and ice which is made by an ice maker, wherein a water supply apparatus is installed outside the refrigerator for receiving the water filtered by a filter and a water supply valve is connected with the water supply apparatus and a water container is connected with the water supply valve.

(Continued on Supplemental Sheet.)

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

International application No.

PCT/KR2004/000692

**Box No. VIII Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- The present international application was filed on 26 March 2004, the International Search Report and the Written Opinion were issued on 6 July 2004, and the Demand for International Preliminary Examination was filed on 15 September 2004.
- The Written Opinion issued with the International Search Report on 6 July 2004 states that claims 1-32 are considered to be novel, involve an inventive step and industrially applicable.
- The applicant has not filed any amendments to this international application since filing the Demand for the International Preliminary Examination. Therefore, this international preliminary examination report will include the same contents as the Written Opinion.

**Supplemental Box**

**In case the space in any of the preceding boxes is not sufficient.**

Continuation of:

Box V.

Comparisons between the present claims and said documents are made as follows:

**1. Novelty**

Claims 1–32 are the same as D1 in that the refrigerating chamber is provided at an upper portion of the refrigerator and the freezing chamber is provided at a lower portion thereof. However, claims 1–32 are different from D1 in the installation location of the ice maker and the ice storage, and in the dispenser for supplying cold water and ice which is not provided at the refrigerator of D1. Claims 1–32 are the same as D2 and D3 in a pair of doors formed at left and right sides of a refrigerator and the dispenser for supplying cold water and ice, but different from D2 and D3 in the features of the refrigerating chamber, the freezing chamber and the ice maker. Therefore, claims 1–32 are considered to be novel under PCT Article 33(2).

**2. Inventive Step**

Claims 1–32 are the same as D1 in the features of the refrigerating chamber formed at a lower portion of the refrigerator and the freezing chamber formed at an upper portion thereof, but different in the installation location of the ice maker and the ice storage; and claims 1–32 are the same as D2 and D3 in a pair of doors formed at left and right sides of the refrigerator and in the dispenser for supplying cold water and ice, but different in the arrangement of the heat exchangers and the effect thereof. In addition, it is not obvious to a person skilled in the art to arrive at the present invention by combining the teachings of said documents. Therefore, claims 1–32 are considered to involve an inventive step under PCT Article 33(2).

**3. The subject matter of claims 1–32 is considered to be industrially applicable.**